OCR
Oxford Cambridge and RSA

GCE

Psychology

Unit **H167/01**: Research methods

Advanced Subsidiary GCE

Mark Scheme for June 2016

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All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

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Section A: Multiple choice

Q	Answer
1	A
2	C
3	A
4	B
5	C
6	B
7	B
8	A
9	C
10	A
11	A
12	B
13	C
14	A
15	C

Section B: Research design and response

Identify the target population in this research. [1]					
Question			**Answer**	**Marks**	**Guidance**
16			The target population is the (125) elderly residents of the Oaklands residential home.	**Max 1**	Do not accept 'elderly people' in general as creditworthy (must refer to the elderly in the one specific home identified).

Describe how random sampling could be used to obtain participants for this study. [3]					
Question			**Answer**	**Marks**	**Guidance**
17	**(a)**		Random sampling could be used by getting all the names of the 125 elderly residents who live in The Oaklands residential home and putting them in to a hat and then selecting names from it.	**Max 3**	Context = residents, elderly people Must include some reference to all members of the target population being involved in the selection process.
			Clear description of how random sampling could be used in context	**3**	
			Clear description of how random sampling could be **used** but not in context **OR** Attempt in context	**2**	
			Brief and/or unclear description of random sampling (whether in context or not)	**1**	
			No creditworthy response	**0**	

Evaluate the use of random sampling in this study. [6]					
Question			**Answer**	**Marks**	**Guidance**
17	**(b)**		More representative of the target population; able to generalise the findings about the effect of pets on loneliness more accurately to the target population; less bias in the selection/recruitment of participants etc	**Max 6**	-Context = pets, loneliness, features of the residents of the home (e.g. elderly) -Accept strengths and/or weaknesses for evaluation points made e.g. selecting participants in a way that any elderly resident of the home could be chosen to participate enables the findings about the effect of pets on loneliness to be generalised more accurately to all the residents).
			Good evaluation with reference to 2 or more points in context	**5-6 marks**	
			Reasonable evaluation. Two (or more) points made, but one is weaker/less clear than the other, or not in context	**3-4 marks**	
			Limited evaluation whether in context or not	**1-2 marks**	

Evaluate the use of random sampling in this study. [6]					
Question			**Answer**	**Marks**	**Guidance**
					Comments here could refer to being more representative of the target population; ability to generalise the findings about the effect of pets on loneliness more accurately to the target population; less bias in the selection/recruitment of participants etc

Identify the independent variable in this study. [1]					
Question			**Answer**	**Marks**	**Guidance**
18	**(a)**		The IV is being in contact with, and/or caring for an animal.	**Max 1**	

Identify the dependent variable in this study. [1]					
Question			**Answer**	**Marks**	**Guidance**
18	**(b)**		The DV is loneliness.	**Max 1**	

Explain how you would use the experimental method to conduct this research. Justify your decisions as part of your explanation. [12]
In your answer the required features that you must refer to are:
-the experimental design you would use
-how the dependent variable will be measured
-the control of at least one extraneous variable
You should use your own experience of practical activities to inform your response

Question			**Answer**		**Marks**	**Guidance**
19					**Max 12**	

<table>
<tr><th>Level of response</th><th>Details of required features (RFs) included</th><th>Justification of decisions made</th><th>Reference to own practical work</th></tr>
<tr><td>Good
10-12 marks</td><td>-All 3 required features addressed
-Accurate and detailed knowledge and understanding of each feature in context
-Good evidence of application of required features in context</td><td>-Appropriate justification of all decisions and some is contextualized
-Well developed line of reasoning that is clear and logically structured</td><td>-Explicit reference to own practical work and clear links between own work and the planned research for each required feature.

e.g. specific mention of aim or procedural features

10 marks if just one RF linked, 11 marks if two and 12 if all three</td></tr>
<tr><td rowspan="2">Reasonable
7-9 marks</td><td>-All 3 required features addressed
-Reasonably accurate and detailed knowledge and understanding of each feature
-At least two applications of required features in context</td><td>-Some appropriate justification of decisions related to all three required features (7 marks if only two required features justified)
-There was a line of reasoning evident with some structure</td><td rowspan="5">-No explicit link between own practical work and required features</td></tr>
<tr><td colspan="2">If two required features are addressed in detail and justified in context and explicit links made to own practical work award 8 marks</td></tr>
<tr><td rowspan="3">Limited
4-6 marks</td><td>-Two of the required features addressed
-Limited application of required features
OR all required features referred to but in a limited way</td><td>-Attempt to justify decision(s) but weak
-Evidence of some structure, but weak</td></tr>
<tr><td colspan="2">If one required feature addressed in detail and justified in context and explicit links made to own practical work award 4 marks</td></tr>
<tr><td rowspan="2">Basic
1-3 marks</td><td>-One of the required features addressed
-Weak application of required features
OR more than one of the required features referred to but in a very brief and/or basic way</td><td>-None, or if present very weak</td></tr>
</table>

Write a null hypothesis for this study. [3]						
Question			**Answer**		**Marks**	**Guidance**
20			There will not be a significant difference in the ratings of feelings of loneliness (on a scale 1 to 10) experienced by elderly people in a care home between those who take care of a cat for a month and those who do not.		**Max 3**	-Can be written in future or present tense. -Use of the word 'significant' is not necessary for full marks. -Award zero for citing alternative hypothesis -Award zero if reference to relationship' or 'correlation' -For full marks both the IV and DV must be operationalised.
			Correctly cited null with both IV and DV operationalised		**3**	
			Correctly cited null with reference to both variables, but neither or only one operationalized.		**2**	
			Simply stating 'no difference'	**OR** a null with reference to just one variable	**1**	
			The candidate has not provided any creditworthy information		**0**	

Outline one advantage of conducting this research in a real life setting. [2]						
Question			**Answer**		**Marks**	**Guidance**
21			Advantages can include: high ecological validity (studying elderly people in their real residential home); samples naturally occurring behaviour; behaviour is unrestricted etc		**Max 2**	-Context = pets, loneliness, features of the residents of the home (e.g. elderly)
			Clear outline of an advantage of conducting the research in a real life setting in context		**2**	
			Attempt to outline of an advantage of conducting the research in a real life setting in context	**OR** Clear outline of an advantage of conducting the research in a real life setting, but not in context	**1**	
			No creditworthy response		**0**	

Identify two ethical considerations in this study and explain how you would address them. [6]					
Question			**Answer**	**Marks**	**Guidance**
22			Ethical issues could include: causing elderly residents distress by discussing loneliness with them; issues of safety around animals; interaction with people they are not familiar with (distress); may not fully understand what to research is about (consent); may become attached to animals and not want it taken away etc 3 marks for each ethical issue	**Max 6**	-Context = pets, loneliness, features of the residents of the home (e.g. elderly)
			Ethical issue clearly identified and way to address it clearly explained in context	**3**	
			Ethical issue clearly identified and attempt to explain how to address it in context **OR** Ethical issue clearly identified and way to address it clearly explained, but not in context	**2**	
			Attempt to identify ethical issue and attempt to explain how to address it (whether in context or not) **OR** clearly identified ethical issue with no suggestion of how to address it	**1**	
			The candidate has not provided any creditworthy information	**0**	

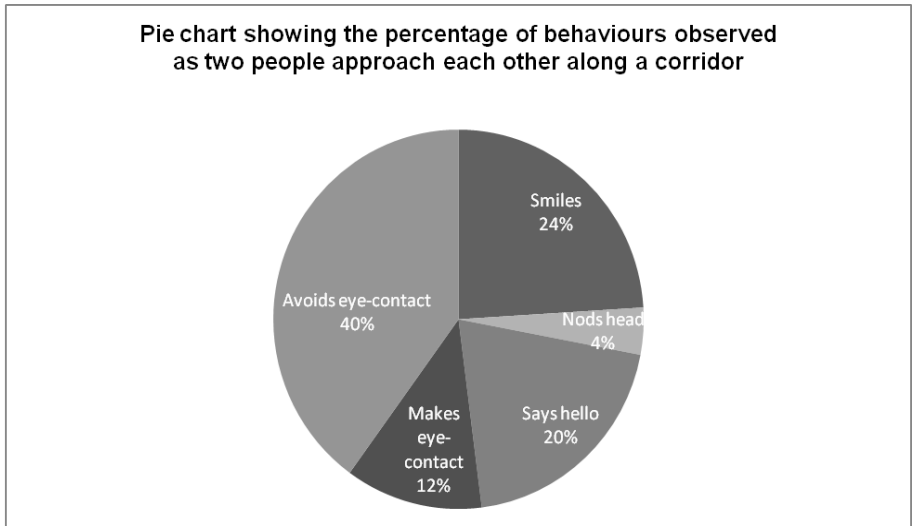
Section C: Data analysis and interpretation

This study is an example of a structured observation. What is a structured observation? [2]					
Question			**Answer**	**Marks**	**Guidance**
23			An observation that uses an explicitly predetermined behavioural categories of behavior.	**Max 2**	-Answer does not have to be in context of the research outlined.
			Clear outline of what a structured observation is	**2**	
			Attempt to outline what a structured observation is	**1**	
			The candidate has not provided any creditworthy information	**0**	

What level of data is obtained in this study? [1]					
Question			**Answer**	**Marks**	**Guidance**
24			The level of data obtained in the study is nominal.	**Max 1**	
			The candidate has not provided any creditworthy information	**0**	

What is the ratio of the number of times people avoided eye-contact to the number of times people said hello? [2]					
Question			**Answer**	**Marks**	**Guidance**
25			The ratio is 2:1	**Max 1**	-80:40 is creditworthy for 1 mark
			Correctly stated ratio, simplified to 2:1	**2**	
			Just saying 80:40 without simplifying the answer	**1**	
			The candidate has not provided any creditworthy information	**0**	

What is the mode for the type of behaviour observed by people as they approach each other in the corridor? [1]					
Question			**Answer**	**Marks**	**Guidance**
26			The mode ‘avoids eye-contact’ (with 80 occurrences)	**Max 1**	Accept figure ‘80’ as correct answer
			Correctly stating the mode as ‘avoids eye-contact’	**1**	
			The candidate has not provided any creditworthy information	**0**	

Sketch a pie chart to show the data collected in this study. [4]					
Question			**Answer**	**Marks**	**Guidance**
27				**Max 4**	-Sectors of the pie chart need only be approximate sizes (examiners do not need to check with protractor or overlay in RM assessor) -Calculations can be percentages and/or degrees (decimal places or whole figures) of circle (within labeling of the pie chart, or separately at the side) Avoids eye contact 40% = 144 degrees Smiles 24% = 86.4 degrees Nods head 4% = 14.4 degrees Says hello 20% = 72 degrees Makes eye-contact 12% = 43.2 degrees
			1 mark is awarded for correctly calculating what proportion of the circle should represent each of the five behavioural categories. 1 mark is awarded for drawing the sectors in proportional size to the data displayed 1 mark is awarded for clear labelling of each sector of the pie chart 1 mark is awarded for a clear and appropriate title		
			All features included	**4**	
			3 features included	**3**	
			2 features included	**2**	
			1 feature included	**1**	
			The candidate has not provided any creditworthy information	**0**	

<table>
<tr><th colspan="6">Outline two conclusions that can be made from the data collected in this study. [6]</th></tr>
<tr><th colspan="3">Question</th><th>Answer</th><th>Marks</th><th>Guidance</th></tr>
<tr><td>28</td><td></td><td></td><td>Conclusions could include: the most frequent behaviour was to avoid eye-contact, which suggests people do not like acknowledging each other in a corridor; The lowest frequency of behaviour was ‘nods head’, which suggests people do not like greeting people as they meet in a corridor.

Accept any other appropriate conclusions here.</td><td>6</td><td rowspan="6">-Context = corridor, workplace, office worker etc

-Simply referring to the behaviour categories (e.g. ‘smiling’) is not sufficient for context here

-Clear (explicit) interpretation of findings (not simply stating a finding) is required for top band

-For 2 marks could be saying … people avoid each other when approaching in the corridor etc

Do not accept reference to number of people engaging in a certain behavior (as opposed to number of behaviours)</td></tr>
<tr><td colspan="2">3 marks for each conclusion</td><td></td></tr>
<tr><td colspan="2">Clear, detailed response in context</td><td>3</td></tr>
<tr><td>Clear, detailed response but not in context</td><td>OR attempt in context</td><td>2</td></tr>
<tr><td>Attempt, whether in context or not</td><td>OR simply stating a finding</td><td>1</td></tr>
<tr><td colspan="2">The candidate has not provided any creditworthy information</td><td>0</td></tr>
</table>

In a follow-up study conducted a month later that recorded 310 behaviours in total, the researchers noted that people avoided eye-contact 125 times. Write this as a percentage to two significant figures. Show your workings. [3]						
Question			**Answer**		**Marks**	**Guidance**
29			125 written as a percentage of 310 is 125/310 x 100 = 40.3225806 Expressed to two significant figures this is 40		**Max 3**	-Expression of the percentage in the initial stage of the calculation can be written to any number of decimal places
			AO2 marks	1 mark is awarded for application of knowledge and understanding of how to convert raw data in to a percentage and a further mark for the application of knowledge and understanding of what significant figures are applied to the data in this study	3xAO2	
			Percentage correctly calculated and written to two significant figures		**3**	
			Percentage correctly identified but not written to two significant figures		**2**	
			Just showing workings (calculations) i.e. 125/310 (x 100)	**OR** just stating correct answer without any workings	**1**	
			The candidate has not provided any creditworthy information		**0**	

Explain what is meant by a covert observation. [2]					
Question			**Answer**	**Marks**	**Guidance**
30	**(a)**		An observation in which the participants are unaware that they are being observed by a researcher.	**Max 2**	-Answer does not have to be in context
			Clear outline of what a covert observation is.	**2**	
			Attempt to outline what a covert observation is.	**1**	
			The candidate has not provided any creditworthy information	**0**	

Evaluate the use of covert observation in this study. [4]						
Question			**Answer**		**Marks**	**Guidance**
30	**(b)**		Possible responses could include: sampling of more natural behaviours; increased validity; demand characteristics reduced/eliminated; ethical problems (e.g. consent, invasion of privacy) etc. Accept any other creditworthy responses.		**Max 4**	-Context = corridor, workplace, office worker etc -Also accept behavioural categories (e.g. smiles) as context in this question.
			Two or more clear points in context		**4**	
			One point in context with another that is not	**OR** one detailed point in context	**3**	
			Two clear points but neither in context	**OR** just one point in context	**2**	
			Attempt (whether in context or not)	**OR** one clear point but not in context	**1**	
			The candidate has not provided any creditworthy information		**0**	

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